

### REMARKS

The Office action mailed 7 May 2010, has been received and its contents carefully noted. Claims 29-36, 39 and 40 were pending, claims 31-34 and 36 were withdrawn from consideration, and claims 29, 30, 35, 39 and 40 were rejected. By this Response, claim 29 has been amended and claims 41 and 42 are new. Support may be found in the Specification and claims as originally filed. See, for example, page 18, lines 7-14 and page 28, line 28, to page 29, line 13. No statutory new matter has been added. Therefore, entry of the amendment and reconsideration in view of the following are respectfully requested.

#### Rejection under 35 U.S.C. 102(b)

The Examiner rejected claims 29, 30, 35, 39 and 40 under 35 U.S.C. 102(b) as being anticipated by London (1995).

According to the present invention as claimed, the device comprises a cartridge which contains  $n+1$  number of substrates, where  $n$  is the number of proteins in the plurality of proteins. In other words, the cartridge as set forth in the claims contains one additional substrate to the number of proteins to be contacted with aliquots of the same sample in order to measure the reaction rates for each protein for each substrate as exemplified by the three equation sets in Example 2 of the specification. See page 32, line 27, to page 33, line 15.

Applicants respectfully submit that London does not teach or suggest a device which has a cartridge containing a plurality of substrates wherein the number of substrates is one more than  $(n+1)$  the number of the proteins ( $n$ ) being assayed. London simply uses butyrylthiocholine as the substrate when measuring plasma cholinesterase (BChE, PCE assay) or acetylthiocholine as the substrate when measuring erythrocyte cholinesterase (AChE, ECE assay). See p. 59, col. 1. Nowhere does London teach or suggest using both acetylthiocholine and butyrylthiocholine to measure BChE. Nowhere does London teach or suggest using both acetylthiocholine and butyrylthiocholine to measure AChE.

Nowhere does London teach or suggest a device which has a cartridge containing more substrates than the number of proteins being measured. Nowhere does London teach or suggest accounting for the activity of a second protein in a test sample which overlaps with the activity of

the protein of interest by using sensitivity coefficients according to the instant invention. Instead, London teaches using inhibitor As1397 to prevent PCE (i.e. BChE activity) interference when measuring AChE. Thus, based on the teachings of London, one skilled in the art would not have been motivated to provide a cartridge which contains acetylthiocholine, butyrylthiocholine, and one more substrate in order to measure the activities or concentrations of both AChE and BChE in aliquots of the same sample.

Consequently, London does not teach or suggest the claimed invention and the rejection under 35 U.S.C. 102(b) should properly be withdrawn.

#### **Rejection under 35 U.S.C. 103(a)**

The Examiner rejected claims 29 and 40 under 35 U.S.C. 103(a) as being unpatentable over London in view of Jacobs (1993).

Jacobs does not alleviate the deficiencies of London. Nowhere does Jacobs teach or suggest a device which has a cartridge having a plurality of substrates, wherein the number of substrates is one more than the number of proteins which have similar or overlapping properties towards a plurality of substrates.

Therefore, Applicants respectfully submit that the claimed invention is unobvious and the rejection under 35 U.S.C. 103(a) must properly be withdrawn.

#### **Request for Rejoinder**

Applicants respectfully request rejoinder of the withdrawn claims which ultimately depend on claim 29.

#### **Request for Interview**

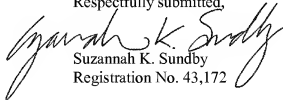
Either a telephonic or an in-person interview is respectfully requested should there be any remaining issues.

### CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Therefore, it is respectfully requested that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. 1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 210-380**, Attorney Docket No. **034047.003DIV1 (WRAIR 00-23)**.

Respectfully submitted,



Suzannah K. Sundby  
Registration No. 43,172

Date: 7 July 2010  
SMITH, GAMBRELL & RUSSELL, LLP  
1130 Connecticut Ave., NW, #1130  
Washington, D.C. 20036  
Telephone: (202) 263-4332  
Fax: (202) 263-4352